

ARMY AVIATION OFFICER EDUCATION SYSTEM: PREPARING
COMPANY GRADE OFFICERS FOR SUCCESS

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCES

by

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ABSTRACT

ARMY AVIATION OFFICER EDUCATION SYSTEM: PREPARING COMPANY GRADE
OFFICERS FOR SUCCESS by Major John H. Karaus, USA, 103 pages

Trends at the combat training centers (CTCs) indicate that Aviation officers fail to successfully apply the TDMP. This thesis seeks to identify if this performance discrepancy is due to a failure of the Army's Leadership Development Process (LDP) to successfully train Aviation company grade officers in the application of the TDMP.

This thesis addresses the institutional and education pillar's role in preparing Aviation officers to apply the TDMP. The study determines the requirements mandated by the Officer Foundation Standards (OFS) and the AOES, and then evaluates the adequacy of this instruction. The study then analyzes the timing of instruction. First the study analyzes when TDMP instruction is accomplished in relation to when officers' duties require its use. Second, the study analyzes the time lapse between instruction and use.

The study concludes that there are areas needing attention in the AOES. First, learning objectives in the programs of instruction (POIs) for the AVOBC and AVOAC do not reflect adequate instruction in the TDMP, nor do they reflect all the subtasks required for proficiency in applying the TDMP. Second, the study found that a majority of officers experience a significant time lapse between TDMP instruction and its use in operational assignments.

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LIST OF ABBREVIATIONS

AOES	Aviation Officer Education System
AVOAC	Aviation Officer Advanced Course
AVOBC	Aviation Officer Basic Course
BCTP	Battle Command Training Program
BOS	Battlefield Operating Systems
CAL	Center for Army Leadership
CALL	Center for Army Lessons Learned
CAS3	Combined Arms Service Staff School
CGSOC	Command and General Staff Officer College
COA	Course of Action
CTC	Combat Training Centers
DA	Department of the Army
ELO	Enabling Learning Objective
GTL	Gross Task List
IPB	Intelligence Preparation of the Battlefield
JRTC	Joint Readiness Training Center
LDP	Leadership Development Process
LDSS	Leadership Development Support System
MQS	Military Qualification Standards
NTC	National Training Center
O/C	Observer/Controller

OAC	Officer Advanced Course
OBC	Officer Basic Course
OES	Officer Education System
OFS	Officer Foundation Standards
OPORD	Operations Order
POI	Program of Instruction
TDMP	Tactical Decision Making Process
TLO	Terminal Learning Objective
TLP	Troop Leading Procedures
TRADOC	Training and Doctrine Command
TRB	Task Review Board
TSP	Training Support Package
UTHP	Unit Take Home Package

CHAPTER 1

INTRODUCTION

Commanders influence the outcome of battles, campaigns, and engagements by assigning missions; prioritizing and allocating resources; assessing and taking risks; deciding when and how to make adjustments; committing reserves; seeing, hearing, and understanding the needs of subordinates and seniors; and guiding and motivating the organization toward the desired end.¹

FM 100-5, Operations

Background

The two most important elements of command are decision making and leadership. Knowing if, what, and when to decide and then directing subordinates to implement these decisions are the keys to mission success.² These elements can compensate for each other, but neither can be replaced in total by the other. As such, leadership and decision making are integral to each phase of the Leadership Development Process and are included as critical tasks in the company grade Military Qualification Standards task list.³

The Leadership Development Process

The Leadership Development Process is the Army's progressive, sequential, and integrated system of preparing officers for their responsibilities as leaders. It is the process by which the Army develops individual skills, knowledge, and attitudes leaders need to

lead, train, and employ weapon systems and soldiers for success in combat.⁴ The driving principle in the Leadership Development Process is that leaders must be prepared before assuming increasing levels of responsibilities.⁵

Army Leader Development Model

In order to meet the individual training requirements of Army officers, the Army developed a sequential and progressive system that integrates three equally important pillars: Institutional Training, Operational Assignments, and Self Development. Figure 1 shows the Army Leader Development Model.

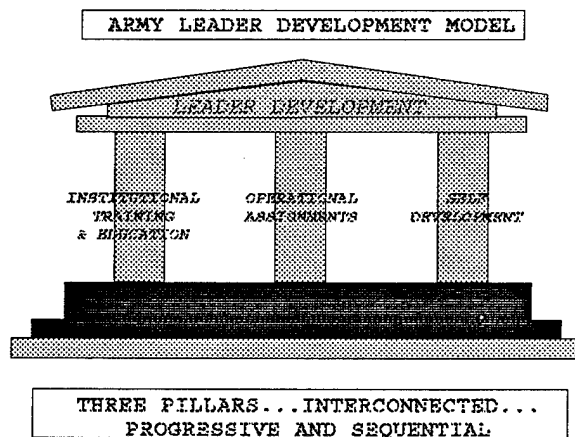


Figure 1. Army Leader Development Model.
Source: DA PAM 350-XX (Final Draft) 29 March 1994, 4.

Institutional training includes all formal schooling and provides the foundation for leader development by teaching the fundamentals of theoretical knowledge. Operational assignments, or unit experience, reinforces formal education by providing an opportunity for

officers to apply theory learned during formal schooling. Finally, self-development includes those activities an officer does to enhance his professional development through self-study.

By integrating the efforts of these three pillars into an individual training plan, unit commanders and developing leaders maximize the professional development provided by the leadership development process.⁶

The Officer Education System (OES)

The Officer Foundation Standards (OFS) system is the primary tool the Army uses to coordinate and integrate the three pillars of the leadership development process, with an emphasis on the officer education system (OES). OFS consists of three levels: OFS I (pre-commissioning), OFS II (company grade), and OFS III (majors and lieutenant colonels). The focus of the system is on standardizing common training within the OES. For OFS II, these schools include Officer Basic Course (OBC), Officer Advanced Course (OAC), and Combined Arms and Services Staff School (CAS³).⁷

Fundamental to the Leader Development Process, as in any training process, is assessment.⁸ Assessment serves the training process in two important ways. First, assessment provides trainers and the trained with an evaluation of performance against an established standard. Second, it provides feedback to the trainer and institution as to the effectiveness of the training process. As a result of this feedback schools can adjust resources, personnel, and training methods so that the training process produces a soldier or unit that is

proficient in a task or group of tasks.⁹ In essence, assessment feedback is the link that ties the training cycle together.

CTC--The Vehicle For Assessment

The Army has a number of assessment vehicles at its disposal to evaluate unit readiness and proficiency. Battle Command Training Program (BCTP), Combat Training Centers (CTCs), unit training exercises, unit external evaluations, and simulation exercises are included in this extensive list. However, commanders that served during Desert Storm and Just Cause were unanimous in their praise for the value of the CTC experience in preparing their units for combat.¹⁰

The combat training centers (CTCs) provide a live simulation environment for assessment of both unit and leader training. The CTCs' simulated combat exercise provides an environment that closely replicates the rigors of combat and provides commanders with an assessment of leader, soldier, and unit skills that contribute directly to unit success.¹¹

Besides the individual and unit experience that CTC training events provide, the officer education system also benefits from the assessment process. Through the close coordination between the CTCs and Training and Doctrine Command (TRADOC), the Army education system gets an assessment of the effectiveness of individual leader training in an environment that closely replicates wartime realities. Cadre at the CTCs provide this feedback to the schools where it is used to adjust institutional training to meet the needs of the field. The CTC assessment and the feedback it provides are invaluable to the Leadership

Development Process and are the cornerstone of the Army training system that prepared soldiers and units for victories in the Persian Gulf and Panama.¹²

Combat Training Center (CTC) Trends

The CTCs have routinely cited command and control problems as a major factor contributing to low unit success rate during training exercises at the centers.¹³ Specific indicators include: failure to use the eight troop leading procedures (TLP)¹⁴, incomplete or improper intelligence preparation of the battlefield (IPB), and failure to integrate the seven battlefield operating systems (BOS).¹⁵ This results in units failing to develop effective plans to successfully accomplish their missions.¹⁶ Normally repetitive failures in a task are assumed indicative of a training failure.¹⁷

Problem

Although each of the shortcomings noted in the CTC trends may be considered separately, taken together they are indicators of units failing to apply the TDMP. The IPB and the integration of the seven BOS are conducted within the context of the TDMP. Because of this the CTCs reported trends at the CTCs indicate that Aviation company grade officers are failing to properly apply the Tactical Decision Making Process (TDMP).¹⁸

Although many variables may influence the application of the TDMP in a unit, observations from the observer/controllers (O/Cs) at the CTCs indicate that Aviation company grade officers are not adequately trained in the process.¹⁹ Their observation does not discount that a

non-training related cause may be the reason for the failure, but only reflects the evaluation process used at the CTCs.

As stated earlier, the Leadership Development Process is comprised of three progressive and sequential pillars. Of the three, the institutional pillar provides the foundation training for all critical leader development tasks.²⁰ It is the first phase in the development process and provides the most logical starting point for this research.

Thesis Question

The question is then: "Does the Aviation Officer Education System (OES) successfully prepare Aviation company grade officers to apply the Tactical Decision Making Process?" In order to answer the thesis of this research, a number of subordinate questions were answered to thoroughly research the question.

Subordinate Questions

The supporting questions of this thesis relate directly to the TDMP instruction provided by the OES. These must answer if it is trained, where it is trained, what is trained, how it is trained, to what standard it is trained, and when in the officer's career it is trained.

Does the OES Provide the Instruction?

The first question that must be answered is: "Is the TDMP a required performance objective in the Aviation OES?" If yes, then the research must determine if the instruction conforms to the guidance

provided by TRADOC and the Training Support Package (TSP). This question analyzes if and where the instruction is required in the Aviation OES and what is the expected objective of the instruction.

Is the Instruction Provided Adequate?

The second question relates to the adequacy of the instruction provided in the schoolhouse. The research must examine the task, condition, and standard of the enabling learning objective (ELO) stated in the AVOAC Program of Instruction (POI) and compare this against the real world performance objective. The question the research must answer is: "Does the instruction provided meet the duty requirements of company grade officers in operational assignments?" In essence, are we teaching officers what they need in order to perform their duties? If yes, then the research must answer two questions: (1) "Are we teaching the officers what they need to know and at the appropriate level of learning?", and (2) "Is adequate time allocated in the POI to teach them to the expected standard?" The research will address what the standard is and its applicability to duty performance.

Does the Evaluation Method Validate the TLO?

The third question assesses the evaluation method of the instruction. The research must answer the question: "Does the OES verify the officer's ability to perform to that standard?" If yes, then the research must answer two questions: (1) "What level of learning (cognitive level of learning) is expected?", and (2) "What evaluation method is used?"

Is the Training Timely?

The fourth question analyzes the training in relation to when it is taught. If the OES is teaching to the prescribed standards and this standard meets the professional development needs of officers, then the research must address the timing of the training. The research must answer: "Is the TDMP taught in the OES prior to an officer's duties requiring its application?"

Two subordinate questions must be answered by the research in addressing this question. The first relates to when an officer receives instruction on the TDMP in the OES in relation to the requirements of his duties: "Where in the OES are officers taught the TDMP in relation to their professional duties?" The study examines whether the training occurs in the OES prior to the officer being required to apply the process in his duties. The second question analyzes the time differential between when an officer is taught the TDMP and when he is required to apply the TDMP: "How much time elapses between instruction and application?" If an officer is taught the process and is not required to apply or use the knowledge within a reasonable period of time, then it is predictable that the officer will not recall the knowledge gained from the instruction.²¹

Assumptions

Six assumptions were made to substantiate the validity of this thesis. The first was that the results of the evaluations from the CTCs were reliable and the standards used to evaluate performance were universal and consistent with current doctrine. Given that

observer/controller observations are the primary source for indicating that there was a problem with unit and individual performance, an assumption was made that the source of information is valid.

The second assumption of this study was that the skills required for successful mission accomplishment at the CTCs are equal to those skills required for success in war. Given the constraint that a war cannot be initiated to produce analytical results to support the thesis of the study, an assumption was made that the CTCs replicate the battlefield and that the data received from rotation evaluations was sufficient to draw conclusions.

The third assumption was that the AVOBC and AVOAC Programs of Instruction (POIs) accurately reflected the courses' instruction and learning objectives. Given that POIs were the only available means to evaluate the two courses, it was necessary to assume their accuracy in reflecting course content.

The fourth assumption was that Aviation officers attending the Command and General Staff College (CGSOC) were representative of the Aviation junior field grade officer population. This assumption was necessary to validate the data received from the Aviation Officer Education System (AOES) survey administered as part of this study to students attending CGSOC.

The fifth assumption was that personal bias that could influence individual observer/controller (O/C) unit assessments was averaged out by analyzing unit evaluations over a four year period. Since the personnel assigned to the CTCs rotate approximately every two years, any personal

bias that may surface from any particular O/C was reduced by the regular reassignment of O/Cs at the CTC.

The final assumption made was that a skill deficiency did exist. Although the officers' performance discrepancy may associated with a non-training related cause, the purpose of this study was to evaluate the AOES's ability to successfully prepare company grade officers to apply the TDMP.

The Limitations

There were two limitations to this research project. The first limitation of the study was that the CTCs do not have a standardized method of annotating unit evaluations/assessments. Although a standard format is used by O/Cs at the CTCs, unit assessments reflect individual O/C judgments as to what the most important issue is for an event or battle. Additionally, O/Cs do not list every problem and typically only report three or four problems. Because of this it was difficult to quantitatively or qualitatively analyze unit assessments based solely on unit take-home packages (THP).²²

The second limitation of this study was that evaluation of the Aviation Officer Education System was limited to a review and analysis of the AVOBC and AVOAC Programs of Instruction (POI). This limitation was important to note because there was no assurance that the POI accurately reflected what was actually taught in the courses. Personal observation of the instructional content and process would have provided the most accurate assessment of the courses, but this procedure was outside the capabilities of this study.

The Delimitation's

The time period the study addressed was 1990 (fiscal year) to the present. Focusing on this particular period ensured that the research encompassed a time-frame that included the entire life of the current LDP doctrine, which originated in writing in July 1990. However, the primary reason for the limitation to this period was based on a number of factors affecting the officer education system in the Aviation Branch as well as the infancy of the branch prior to 1990.

The Aviation Branch was officially organized as a separate branch in June 1983. Many changes occurred following this date. Along with this turbulent birth came a period of major changes in the organizational structure of divisions with the formation of fourth maneuver brigade - the Aviation Brigade. With the formation of a separate combat arms branch also came the responsibility of forming a branch specific officer education system (OES) to support the leader development of Aviation company grade officers. Neither of these changes reached fruition until approximately 1986.

Compounding the changes within the Aviation Branch was a major shift in the way institutional training is accomplished in the schoolhouse. Going from a large group instruction (LGI) to small group instruction (SGI) required a reformatting of the entire OES system which did not reach culmination until approximately 1990.

By limiting the research to this period the study focused on the current Aviation Officer Education System and its ability to meet the requirements of the LDP and OFS/MQS, excluding the changes in the OES prior to 1990. Additionally, by excluding the period prior to 1990, it

also follows that the research excluded the impact of the many changes within the branch prior to 1990 on operational assignments and self development.

The Significance of the Study

The welfare and lives of soldiers depend on commanders and leaders making good tactical, operational, and strategic decisions. Decision making is one of the commander's most important responsibilities. Balanced with leadership, decision making is a vital component of command. The TDMP is the tool the Army provides its leaders to assist them in making good decisions.²³ The result of this study will either be a validation of the officer education system and its ability to prepare Aviation company grade officers to apply the TDMP, or develop recommendations to improve the current system to ensure that the OES and its components are meeting their stated objectives in teaching the TDMP. The objective was to provide analytical study on a systemic problem indicated by the CTCs as a shortcoming in the OES, define its origin, and provide recommendations to the branch to assist in resolving the problem.

Definition of Terms

The definitions of the following terms apply to this study.

Aviation Officer Education System (AOES). For the purpose of this study, the AOES consists of the Aviation Officer Basic Course (AVOBC), Initial Entry Rotary Wing (IERW) training, and Aviation Officer Advanced Course (AVOAC).

Company Grade Officers. Officers in the grade of 2nd Lieutenant through Captain.

Eight Troop-Leading Procedures (TLP). An eight-step process by which leaders prepare units for mission execution. The eight TLP steps are:²⁴

- Step 1. Receive or perceive a mission
- Step 2. Issue a warning order
- Step 3. Make a tentative plan (The TDMP occurs within the context of this step)
- Step 4. Initiate movement
- Step 5. Reconnoiter
- Step 6. Complete the plan
- Step 7. Issue the order
- Step 8. Supervise

Intelligence Preparation of the Battlefield. Intelligence Preparation of the Battlefield (IPB) is a systematic and sequential process used to analyze the enemy, weather, and terrain as they relate to the friendly unit mission and specific battlefield environment in its area of operations and interest.²⁵

Leadership Development Process. "A continuous, progressive, and sequential process through which leaders acquire skills, knowledge, and behavior necessary to maintain a trained and ready Army in peacetime to deter war."²⁶ The LDP consists of three pillars: institutional training and education, operational assignments, and self-development (see Figure 1.1). The efforts of these three pillars are interconnected, and

through the Military Qualification Standards and are integrated to ensure overlap, but no duplication between the pillars.²⁷

Live/Constructive Simulation. Live simulations consist of tactical operations conducted by units during field training exercises in an environment that attempts to replicate combat. The combat training centers provide this type of environment. Constructive simulations consist of computer based simulations.

Military Qualification Standards. The system that provides "a blueprint for officer training and leader development in both resident schools and units." MQS integrates the efforts of the LDP into a single system that provides the professional development and knowledge required to go to war.²⁸ It should also be noted that this system is currently undergoing review and will be replaced by the Officer Foundation Standards (OFS) which will have the same purpose.²⁹

Real World Performance Objective. The skill or task that officers are expected to perform. For the purpose of this study, the real world performance objective is the application of the TDMP in a simulated or actual combat environment.

Tactical Decision Making Process. A systematic approach to tactical decisionmaking that integrates the application of professional knowledge, logic, and judgment into a four step process that ultimately results in a mission plan or operations order. These four steps; mission analysis, course of action development, course of action analysis and comparison, and decision ensure the integration of the seven battlefield operating systems. There are four methods to accomplish the TDMP, they are: the deliberate decision-making process

(DDP), the combat decision-making process (CDP), the quick decision-making process (QDP), and immediate action drills.³⁰

Summary

Chapter 1 provided the foundation for the study. From this point the study completed a thorough research of available literature to validate the problem and determine what previous research had been completed on this topic.

ENDNOTES

¹ U.S. Army, FM 100-5, Operations (Washington: Department of the Army, 1993), 2-14.

² Ibid., 2-14 to 2-15.

³ U.S. Army, STP 21-II-MQS, Military Qualification Standards II: Manual of Common Tasks For Lieutenants and Captains (Washington: Department of the Army, January 1991) 2-2/3-4/3-82.

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CHAPTER 2

LITERATURE REVIEW

Overview

An integral part of any study is a thorough review of current and past literature on the subject. For this study on the officer education system, or more specifically the Aviation Officer Education System, the literature review focused on three areas of research: problem validation, the officer education system, and instructional design. These areas substantiated the problem, provided a foundation for understanding the current officer education system (OES), and provided a means to assess the OES.

Problem Validation

Initially the research focused on the validation of the problem: Trends at the CTC's and BCTP indicate aviation company grade officers fail to apply the TDMP. A number of DA level studies have concluded that this skill is lacking in our junior officers.^{1,2} Additionally, a number of previous theses and research projects have concluded that junior company grade officers lack the appropriate skills necessary to apply the TDMP. Although these conclusions supported the DA studies as well as the thesis of this study, they failed to substantiate their findings qualitatively or quantitatively.

Three areas provided a more supportable validation of the problem. First the regularly published trends from BCTP and the CTC's provide a qualitative analysis of performance trends from first-hand observations of observer/controllers (O/Cs) at the CTC's and BCTP. These publications provide analytical findings that Aviation Company grade officers fail to apply the TDMP. The second area researched was the unit take-home packages (UTHP) from the CTCs. The UTHPs provide an "assessment" of units' performances during rotations. The final area researched was previous studies related to this study.

A thorough research and analysis of these three areas of literature: Previous Studies, Center for Army Lessons Learned (CALL) CTC trends, and unit take home packages studies provided the substantiated evidence that there was indeed a problem.

CTC/BCTP Trends

To enhance the feedback process in the training cycle the United States Army Aviation Center and the Aviation Observer/Controllers instituted a program that incorporated briefings from the Senior Aviation O/C from the CTC's to the center leadership to update Aviation Branch leadership on current trends at the CTC's. The discussions primarily focused on junior officers', lieutenants and captains, performance during rotations at the training centers. Additionally, the O/Cs briefed the current OAC and OBC class in session on these trends. The purpose of these briefings was to ensure that both students and trainers were aware of evaluated shortcomings in both the institutional and self development pillars.

In January 1994, the Senior Aviation Observer/Controller at JRTC commented that one major training discrepancy his team found was with company grade officers (leaders and staff) being unable to properly apply the troop leading procedures (TLP) and the tactical decision making process (TDMP). The Senior Observer/Controller from NTC and CMTC both concurred with this finding. Subsequent discussions determined that their assessment was that these failures resulted from lack of training. They expressed concern that the OBC and OAC were not providing adequate training in the TDMP and TLP.³

Center for Army Lessons Learned (CALL)

Quarterly, the Center for Army Lessons Learned (CALL) publishes a bulletin that highlights current trends at the combat training centers. Specifically, the bulletins address performance deficiencies as they relate to the battlefield operating systems.

A review of this publication validated the personal observations of the senior observer/controllers. In many cases these publications identify shortcomings in performance elements of the tactical decision making process such as synchronization, IPB and battle staff integration.⁴ However, they generally stop short of analysis which specifically addresses an overall failure to apply the tactical decision making process. One recent issue, July 93, identified the TDMP in particular as a deficiency. This publication stated that CTC trends consistently indicate brigade and battalion staffs do not understand the command estimate process. They specifically identify course of action (COA) development, war-gaming, synchronization, and staff integration as

ineffective. Additionally it noted that staffs do not understand what product is expected from the tactical decision making process.⁵

Previous Studies

Only one study was found that provided a quantitative evaluation of unit performance as a function of using the TDMP. This research was completed by RAND Corporation, Arroyo Center. Published in draft form in May 1994, the study was initiated at the request of the Army to help identify systematic C2 problems Observer/Controllers (O/Cs) had consistently reported as having a substantial impact on past rotations.⁶ Statistically O/Cs noted that command and control failures occurred in approximately 50% of friendly battle losses.⁷ The purpose of the RAND study was to substantiate those observations.

The significance of the RAND study is that it is the only research found to quantitatively address decision making and planning as a variable to exercise success. Using data from four sources, which included in-field observations, a review of unit take-home packages (UTHP), and a focused survey administered to rotation units, researchers found a number of systematic command and control problems that validated the O/C observations.⁸

Overall, the RAND study found six major problems, two of which were related to the TDMP. The planning process (or TDMP) was found to be the most frequent problem with unit staffs and commanders and ultimately resulted in plans that were inadequate (limited chance of defeating the OPFOR) 65% of the time and not executable 13% of the time.⁹ The study also found that three specific problems were attributable to

the planning failure: failure to integrate the battlefield operating systems (BOS), IPB preparation, and staff cohesion.¹⁰

Unit Take-Home Packages (UTHP)

Following every unit rotation at the CTCs, units are given a UTHP that contains a consolidated record of unit "evaluations" that are designed to help units focus their home-base training. Copies of these UTHPs are maintained at the Center for Army Lessons Learned (CALL), Fort Leavenworth, Kansas. For this thesis, a review of unit take home packages (UTHP) was completed to validate the findings of the RAND study and to gain an understanding of what specific shortcomings the training centers identified as attributable to the tactical decision making process.

A review was completed on randomly selected UTHP for the period 1992-1993. Consistent with the Rand findings, the review of UTHP found that although these documents provide an excellent source for general problem identification, they lack the "quantitative rigor" necessary for good statistical analysis.¹¹ Although these packages are arranged in logical sequence by battlefield operating systems (BOS) and provide a standard format, the primary limitation is due to the way evaluations are recorded. "Assessments" in these packages fall under broad categories and address areas that units should focus their training efforts on. Additionally, comments in the UTHP are not consistent for every unit and only reflect what the O/C deems "important" or the most significant issue during a particular battle.

For the purpose of this thesis, the review of UTHP was used only as a baseline for understanding the RAND study. Attempting to statistically analyze the data and draw parallel conclusions to the RAND study would have been inappropriate and could not have yielded valid results. Although this still provided a basis for analytical assessment, its primary value was a validation of a finding of consistent problems in the planning process at the training center.

Officer Education System (OES)

Next, the research focused on the officer education system itself. The literature in this area falls into three topic areas: leadership training and education doctrine, Military Qualifications Standards (MQS) and programs of instruction (POIs) for the Aviation Officer Basic Course (AVOBC) and Advanced Course (AVOAC).

The literature in this area provided a progressive review of what the system's expectations are, what structure is provided to meet these expectations, and finally what methods are used to achieve the OES's expectations in the institution. Additionally, this area of research provided insights into the numerous changes that have occurred in the system over the last decade. However, the primary focus was to identify any training discrepancies that may correlate with the stated problem.

Leadership Development Process (LDP)

Having established that there is a problem the next part of the research dealt with the system that the Army uses to provide sequential and progressive development throughout an officers career--The

Leadership Development Process (LDP).¹² DA PAM 350-XX, Leader Development for America's Army defines the current leadership development doctrine¹³ and replaces DA PAM 600-32, Leader Development for the Total Army. This publication describes the three pillar system of development and its implementation. TC 22-XX, Leader Development in Organizations, defines the system's expectations of professional development in the operational assignment pillar and provides guidance on implementing sound programs at unit level.¹⁴ Finally, the STP 21-XX series of manuals, Military Qualifications Standards identifies the common tasks and task areas for officers at each of three levels MQS I, MQS II, and MQS III. The STP 21-XX series also defines responsibilities within MQS and the three sequential and progressive pillars.

DA PAM 350-XX

DA PAM 350-XX "institutionalizes the leadership development process, the three pillars of leader development, and the leadership development support system (LDSS)." ¹⁵ The primary difference between this publication and its predecessor, DA PAM 600-321, is that it better defines the expectations, roles, and integration of the Army's three-pillar leader development support system in the leader development process. These three pillars; institutional and education, operational assignments, and self development are progressive, sequential, and provide for an education that prepares officers for the next level of responsibility. They are logically aligned so that each step in the process builds on the last.¹⁶ Essentially, these three pillars are a military adaptation of the three step adult learning cycle where an

individual learns basic skills and knowledge, gains experience through practical application, and finally is able to learn higher order concepts and knowledge through self-development and self study.¹⁷ However, the major change from DA PAM 600-32 is that Military Qualification Standards (MQS) is replaced by the Officer Foundation Standards (OFS).

MQS Transition to OFS

Where MQS attempted to provide a standard list of common tasks that were divided between the three pillars of the LDP, OFS focuses on providing a common foundation of training in the institutional and education pillar that commanders and officers can build on in the operational and self development pillars.¹⁸

MQS was the result of the Army's Review of Education and Training for Officers study in 1978.¹⁹ The study found that there was a need to develop a standard set of skills, knowledge, and attitudes required for success in the military. MQS was developed over the next 15 years with manuals published for each of the three MQS levels.²⁰ This evolution of MQS coincided with a number of studies, to include the Professional Development of Officers Study in 1985, which validated MQS and resulted in the creation of an Officer Basic and Advanced Course common core.²¹ These tests also became the foundation of the MQS II common task manual STP 21-II-MQS.²² In 1993, the Army's senior leadership was concerned that MQS was not meeting the requirement to tie together the LDP effectively. This concern resulted in yet another study directed by the Chief of Staff to recheck the MQS system.²³

The Center for Army Leadership conducted the study, using a survey as its vehicle, and made a number of recommendations. The most significant of these being a shift in MQS from a system designed to integrate the effort of the three pillars of LDP to a " ...system that standardizes officer common training and provides a tool for use in operational assignments and self development." OFS in essence became TRADOC's mechanism to manage common military training and tasks under the officer education system (OES).²⁴

Officer Foundation Standards (OFS) Task List

Following the approval of the CAL study in January 1994²⁵ an OFS Task Review Board (TRB) met and developed an OFS gross task list in February 1994. This list was then distributed to branch proponent school for review and recommendations for changes. The list was again consolidated and in April 1994 a Task Selection Conference (TSC) met to finalize the list.²⁶

A review of the Captains GTL finds that there are 83 total tasks. Of these, only 12 of the tasks can be associated with war-fighting skills. The major discrepancy being that the TDMP and/or its components are not included in the list of critical tasks. However, it is embedded as part of Task 01-3303.03-0013 July 1990, Prepare Battalion Combat Orders. The relevance of this is that at a minimum TRADOC does require this task to be taught in OAC. The impact of OFS and its GTL are not known and future study will have to determine the value of OFS on the OES and trends at the CTCs. A review of the Lieutenants GTL results in similar findings. Although the TDMP is not a

primary task, it is an embedded as the eight troop leading procedures in task 04-3303.02-0002, Prepare Platoon or Company Combat Orders.

It is important to note at this point that although the impact of OFS on the officer education system is yet unknown, the OFS GTL is essentially a revision of the OAC/OBC common core task list under the MQS system. STP 21-11-MQS tasks for lieutenants and captains still provide the basis for the OFS Gross Task List.²⁷

The relevance of the research in following the evolution of OFS from its predecessor is that it showed that OFS will not require a restart of the OES for implementation. OFS essentially picks up where MQS left off and refines the focus of the system so that the importance of institutional training in providing a base knowledge is reflected by the system. TRADOC can now effectively manage common training in the leadership development process at a point where OFS can have its greatest impact--on the institution. It also shows that the TDMP, in different forms, is a mandated requirement within the company grade OES for both MQS and OFS. Finally researching the evolution of OFS provided a vehicle to review the numerous studies and publications associated with the OFS and how it impacts the OES.

AVOAC and AVOBC Programs of Instruction (POI)

The next step in the research was to analyze the Programs of Instruction (POI) for the Officer Basic Course and Officer Advanced Course. The purpose of the analysis was not focused on the methodology or objective of the instruction, but rather validating or invalidating whether the Troop Leading Procedures and/or the Tactical Decision Making

are included in the POI's as mandated by TRADOC through MQS or OFS. At this point, the research assumes that the methodology is adequate while validating that the tasks are instructed IAW TRADOC guidance.

The POI's of the Basic and Advanced courses consist of five major critical task groupings: common core tasks, professional knowledge tasks, branch specific tasks, subjects common to two or more branch schools (but not to all) or shared tasks, and common military training directed by an appropriate authority.²⁸ As discussed earlier, TRADOC dictates the common core and common military training tasks by publishing the OFS Gross Task List.²⁹ The remainder of the tasks areas are directed by proponent branch school commandants to meet the needs of branch officers based on a needs assessment.³⁰ Development of these tasks and instruction are the responsibility of branch proponents.

Aviation Officer Basic Course (AVOBC)

The Aviation officer Basic Course is conducted in three phases and incorporated with Initial Entry Rotary Wing (IERW) training to form the Aviation Branch's initial entry officer training. Phase I and Phase III instruction of the POI occur exclusive of IERW, while Phase II is incorporated as part of the rotary wing training. During Phase I and III, the TDMP is introduced through instruction and practical exercise to provide a foundation for Troop Leading Procedures (TLP). A field training exercise (FTX) in Phase III, focuses on developing and executing platoon and company combat operations using the TLP.³¹

Phase I instruction focuses primarily on common military training (CMT) and common core tasks as defined by the OFS Gross Task

List.³² Phase II (IERW) focuses primarily on flight line tasks with the OBC tasks dealing with aviation specific logistics and flight related topics.³³ Phase III completes the CMT and common core tasks and focuses on branch specific tasks and the application of the eight Troop Leading Procedures. This Phase culminates in three day field exercise where students develop, plan, and execute a battalion level mission at platoon and company level.³⁴

Aviation Officer Advanced Course (AVOAC)

The Aviation Officer Advanced Course consists of eight separate blocks of instruction. The common core block of instruction provides the mandatory tasks from the OFS Gross Task List. The remainder of the AVOAC, excluding the staff-ride focuses on progressive and sequential tasks directly related to the Tactical Decision Making Process for combined arms and aviation specific application. Twenty-six percent of the courses 752 classroom hours are allocated to developing, planning and executing Brigade and Battalion combat missions through practical exercise.³⁵

The initial analysis of these two POIs answered two questions of this thesis. First it confirms that the AVOAC and AVOBC are in fact teaching the TLP and TDMP. The second question it answered is whether this training conforms to TRADOC guidance. Although TRADOC assigns proponentcy and responsibility for training support packages (TSP) it does not mandate strict adherence to these TSP's and leaves the methodology to the school commanders discretion.

Instructional Design

The final area of research focused on literature that specifically deals with instructional design and objective. The purpose was to develop a model to evaluate the instruction provided in the OBC and OAC and validate the task, condition, and standards of the instruction. Although sources exist for military specific instructional design, the use of current mainstream civilian literature on the subject provides a neutral model for evaluation. It is also important to note that while no documentation was found, the current U.S. Army appears to reflect on adaptation of civilian education processes. This is important to ensure a valid and accurate model is used to evaluate the officer education system.

Instructional Design Principles and Applications edited by Leslie J. Briggs et al. provides a broad overview of the instructional design process. A feature of this text was that it provided summaries of the mainstream techniques used by several leading educators and authors in the field.³⁶ Using this text as a primary source, and several texts by Robert F. Mager, models were developed for analysis in the methodology presented in chapter 3. A complete review is incorporated there.

Another important note to make at this point is that training, or lack thereof, may not be the cause of a skill deficiency.³⁷ Although the approach in this thesis focused on the Army Training System as a possible culprit in the problem, there may be a number of other reasons why officers are not performing to the prescribed "standards."³⁸

However, this thesis did not address other possible causes for the performance discrepancies as they were outside the scope of the thesis.

Robert F. Mager and Peter Pipe provide a logical sequence by which to determine why a performance discrepancy exists and what the possible solutions are.³⁹ Although it is impossible to determine at this point, their model may provide insight or at least recommendations for further research if the Army training system is determined to be adequate in preparing officers to apply the TDMP.

Summary

The literature review provided the foundation for the research. Although the primary emphasis of this chapter was to define and validate the problem, it also provided some background information on the leadership development process, leadership doctrine, and the officer education system. At this point this information may seem expansive, but it was important that it was introduced in some detail to provide a foundation for understanding the methodology and what systems impact how the problem may evolve. A much more extensive look at these systems and sources was accomplished in the remainder of the study.

The most important conclusion that was be drawn at this point was that there is a performance discrepancy, a difference "between someone's actual performance and his desired performance."⁴⁰ In this case the Army has an expectation that company grade officers apply the TDMP and based on evaluations at the CTCs their performance fails to meet expectations. The remainder of this study aspired to determine "why?" this shortcoming exists.

ENDNOTES

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CHAPTER 3

METHODOLOGY

Introduction

In order to analyze the research data, it was first necessary to develop a model, or methodology which systematically guided the research and data collection, drew conclusions, and provided the results in a logical format. The intent of this study was to determine if the Aviation officer education system successfully prepares company grade officers to apply the Tactical Decision Making Process (TDMP). The methodology analyzed a system, the Aviation OES, and evaluated its performance relative to producing a product, the aviation company grade officer, capable of meeting the expectations of the leadership development process (LDP) and the Aviation Branch.

Model Defined

For ease of understanding, it is worthwhile to first describe the system the study will analyze--the OES--as a simplistic model and then expand on this model to define the methodology as a flow diagram. Figure 2 shows the Aviation OES as a model that this study used to develop the methodology. The Aviation OES includes two courses, the Aviation Officer Basic Course (AOBC) and the Aviation Officer Advanced Course (AVOAC). The purpose of this system is to take company grade

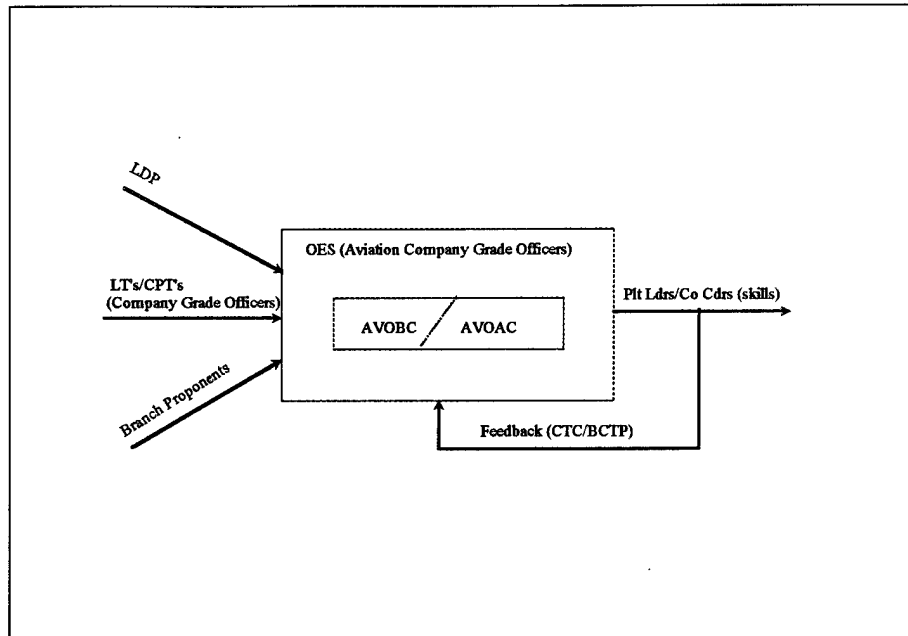


Figure 2. Aviation Officer Education System Model

officers (lieutenants and captains) following commissioning and first assignment and teach them a set of skills.¹ These company grade officers, having successfully completed the OBC and OAC, graduate and are assigned as company commanders, staff officers, and platoon leaders. The tasks, or performance objectives, that are part of the courses' content are directed at two levels. First the LDP through the Military Qualifications Standards and Officer Foundation Standards dictate a task list which becomes the foundation of the course programs of instruction (POI).² In addition to these tasks the branch proponent develops a lists of tasks which have been identified as skills specifically required by the officers of that particular branch.³ To evaluate the effectiveness of the OES and provide feedback to the system, the combat training centers (CTC) and the Battle Command and Training Program (BCTP) assess the performance of units and their leaders. This

information is then provided back to the schools so that the OES can assess the effectiveness of its training.

The model described above and shown in Figure 2 provided the foundation for the methodology and the elements which were analyzed to determine the sufficiency of the OES. Adapting Robert F. Mager's model for analyzing performance problems⁴ and using the elements of the aviation OES model described in Figure 2, the research was provided with a systematic flow diagram to analyze the thesis of this study.

Methodology

The methodology used in this study is a five step process as shown in Figure 3. These five steps were designed to analyze the effectiveness of the aviation OES as defined by the model in Figure 2. Each step consists of answering a subordinate question identified in Chapter 1 of this study. In order to answer these five subordinate questions, at each step there were a number of tertiary questions that the study had to first answer to arrive at a conclusion, answer the primary subordinate question, and proceed to the next step. These steps are progressive and sequential. The analysis at each step had to answer the primary subordinate question before proceeding to the next step. This was necessary due to the hierarchical relationship within the LDP and OES. For instance, the study first had to determine that the TDMP was a required task in the POI before proceeding to an assessment of the instruction in the next step.

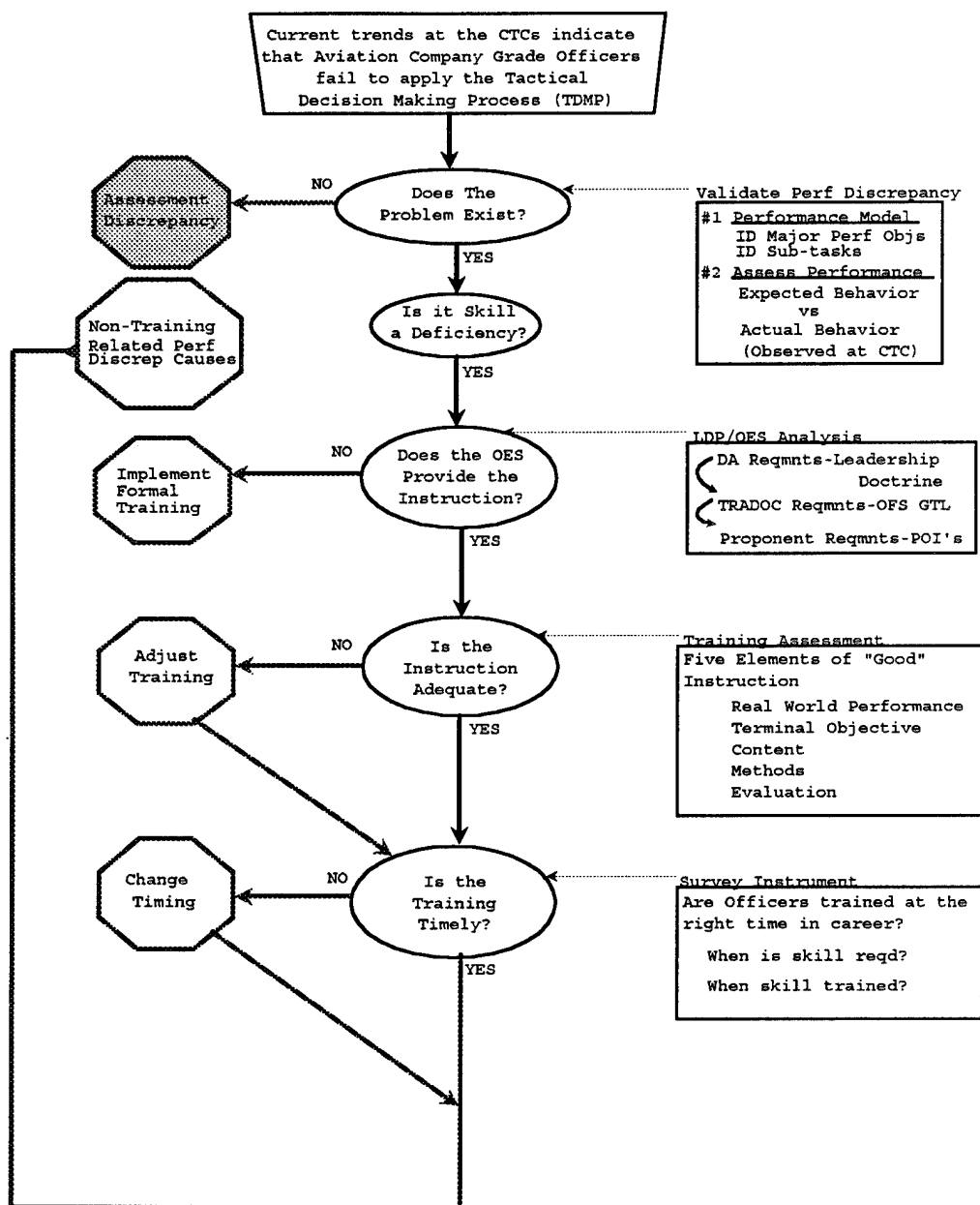


Figure 3. Methodology Defined--Model.

One additional note is necessary at this point to clarify the methodology depicted in Figure 3. At any step during the course of analysis the study may draw a negative conclusion as an answer to the primary subordinate question at that step. A negative conclusion did not necessarily conclude the study at that step. The methodology treated negative conclusions as contributory to the problem, but not necessarily the sole defect of the OES. An example may be a finding at step #3 (LDP/OES Analysis) that the TDMP is not a required performance objective for the OES, but at step #4 (Training Assessment) research may find that the TDMP is part of the POI. In this case it was still necessary to evaluate the instruction to assess its success in teaching the TDMP. Any such discrepancies were recorded during analysis and summarized in Chapter 5 to draw conclusions.

Step 1--Does the Problem Exist?

Little will be said about validating the problem at this point. A full discussion of the problem and its validation is included in Chapter 2, Literature Review. It is sufficient to say that the feedback loop as described in Figure 2 was used to validate the problem and based on the data found during the literature review a performance discrepancy does exist.

Step 2--Does a Skill Deficiency Exist?

In step #2 the study analyzed the possible cause(s) of the performance discrepancy validated in step #1 of the methodology. Performance discrepancies were divided into two categories: skill deficiencies and non-training related causes. This step determined the

nature of the discrepancy, possible causes of the discrepancy, and identified in which category the discrepancy falls. If it was determined that a skill deficiency exists (skill level does not equal required performance level) then the logical progression was to step #3 and an evaluation of the LDP/OES. If research determined that the pre-requisite skill level of officers exists, yet the performance was still short of expectations, then analysis would turn to non-training related causes.

The study did not assume away the possibility of a non-training related cause, but arrived at it in a circular manner. By validating the education system, the study could exclude the OES as a cause for the performance discrepancy. In turn, a conclusion could be drawn that a non-training issue may have been the cause of the problem. The intention at this point is to show that a skill deficiency is not the only cause of a performance discrepancy. Referring to Figure 2 the logic of this is evident.

Step 3--Is the TDMP an Identified and
Required Performance Objective?

This step researched the LDP and the OES to determine if the education system required the TDMP to be taught. The research specifically addressed the institutional pillar of the LDP, but considers all three pillars--institutional, operational, and self-development. It was possible that all three could provide information on which to draw conclusions.

The leadership doctrine identifies three levels that prescribe tasks for the officer education system. Each of these levels prescribes

tasks that are included in the task list at the next level down. At the Department of the Army level, leadership doctrine prescribes a list of tasks that officers must be taught at particular grade levels, i.e., pre-commissioning, lieutenant, and captain. These tasks are referred to as the Common Tasks. These common tasks are identified by the Officer Foundation Standards (OFS) and provide the foundation for the OES. From this list TRADOC developed a gross task list that identifies the common core tasks to be taught at the branch proponent schools (OBC and OAC). The branch proponents then identify branch specific tasks and combine these with the OFS gross task list (GTL) to develop the POIs for their schools.

At this step, the task lists of the three levels were analyzed and all tasks specifically related to the TDMP were identified. These three task lists were then compared for continuity. If the research found that the TDMP was not a required task, then the study recommended formal training be implemented in the OES.

Step 4--Is the Instruction "Good"?

Once the tasks are identified in step #3, this step analyzes the tasks as they relate to real world goals. The objective of this step was to analyze each task in relation to the five elements of an instructional system described in Instructional Design Principles and Application and determine if the instruction provided in the AVOBC and AVOAC was good. Stephen Yelon defines a "good" instructional system as one that meets a "real world need through the coordinated functioning of five elements: real world goals, objectives, content, methods, and

evaluation."⁵ For an instructional system to be "good," these five elements must be consistent or supportive of each other.⁶

To determine if the instruction in the AVOBC and AVOAC were "good" this step assessed whether these five elements were consistent within the instructional design of the courses. There were four criteria used to assess the instruction. First, the study determined if the learning objective matched the real world goal. Next, the study examined the content of the instruction and determined if it was essential to attaining the stated learning objective. Then the study examined the method of instruction to determine if it taught the essential content through motivation, explanation, demonstration, and practice appropriate for attainment of the learning objective. Finally, the study examined the evaluation vehicle to determine if it validated the officers attainment of the learning objective. Instruction was assessed as "good" if it met these four criteria.⁷

Real World Goals

The first element in the analysis was the real world goal. This real world goal is a skill that an officer must perform to a specific standard under certain conditions.⁸ In this study the real world performance was already identified as the successful application of the TDMP. Or more precisely, "given a tactical scenario in a simulated (FTX, STX, CPX, etc.) or wartime environment the officer applies the four-step TDMP described in FM 101-5 to prepare, in writing or orally, an OPLAN or OPORD." This definition is important, as it establishes the expectation of the officer after instruction. Using

this real world goal as a starting point, the study analyzed the remaining elements of instruction to determine if the instruction in the Aviation OES prepared officers to attain this goal.

Instructional/Learning Objective

The second element of analysis was the instructional or learning objective. The objective describes what the expected performance of the student should be at the end of instruction.⁹ It also follows that in order to ensure the instruction is consistent with the real world need that this objective should equal or simulate the real world performance. The study evaluated the learning objectives of the AVOBC and AVOAC POIs based on what Robert F. Mager describes as characteristics of a "useful objective." These elements are: conditions for performance, behavior to be observed, and the criteria the performance is to be evaluated against.¹⁰ Using these elements as a guide, a model was designed that conformed to the Army's performance oriented training model to evaluate the POI.

The Army's performance oriented training model consists of three elements of instruction: task, condition, and standard. Relating these to Mager's "useful objective" the following model was derived:

1. Task: Behavior to be observed
2. Condition: Situational conditions for performance
3. Standard: Criteria that the performance will be judged

Taking this one step further, a model was derived from the real world objective that was used to evaluate the consistency between the objectives in the POIs and the real world performance:

1. Task: Prepare an OPLAN or OPORD, in writing or orally
 2. Condition: Given a tactical scenario, simulated or wartime, and ST 101-5
 3. Standard: Officer applies the four step TDMP IAW ST 101-5
- Using this model, the study compared learning objectives in the POIs to determine if they were consistent with the real world performance.

For the purpose of this study an objective in the POI was assessed consistent if it contained the three elements of the model described above.

Content of Instruction

The third element is content of instruction. Where the objective describes the terminal skill the student is expected to perform, content describes the sub-tasks, skills, and ideas the student must learn to achieve the objective. The application of the TDMP requires students to be able to complete the four steps of the TDMP: mission analysis, COA development, COA comparison, and decision. The TDMP describes the terminal skill and the four steps describe the sub-tasks necessary to achieve the objective. The many skills and ideas required to accomplish each step in turn are the instructional content. The study analyzed the content for completeness based on the inclusion of the sub-tasks in the POI. In this step the study evaluated the courses for completeness based on the POI content. If the POI content reflected all the required tasks and skills then the instructional content was assessed as complete.

Instruction Methodology

The fourth element of instruction is the methodology, or how the instruction is performed. In this element the study analyzed if the teaching strategy matched the level of the objective and performance measure for which it was being used. If the real world performance requires an officer to apply the TDMP in a tactical scenario, then the instruction should allow students the opportunity to practice the TDMP within the constraints of a classroom. What the study attempted to determine was if the instruction required students to perform at the same level as the real world performance.¹¹

Evaluation

Evaluation is essential to the instruction and learning process. This element assessed the evaluation process in the OES. Evaluation not only validates the instruction, but it also provides feedback to the student as to his mastery of the learning objective. A key element of this is a match between the task, condition, and standard of the learning objective and the evaluation. It is obvious that teaching one condition and standard for a task and then evaluating to another condition and standard does not validate the instruction nor the learning process. More importantly, the possibility exists that officers may graduate from the course of instruction unable to perform a task to the standard required for real world performance. In this step the study uses Bloom's six levels of cognitive objectives to determine if the level of learning desired was consistent with the level of

evaluation. The following list describes Bloom's six cognitive objectives.¹²

1. Knowledge: Remember all types of information
2. Comprehension: Explain the message in a communication
3. Application: Use an idea in an appropriate situation
4. Analysis: Break material into parts to find elements
5. Synthesis: Put elements together in a new pattern
6. Evaluation: Make judgements about the value of a thing

The level of evaluation was compared against the OES performance objective (which should equal the real world performance objective as stated earlier) to determine if the OES properly validated its own instruction. If analysis found that the OES is failing to assess students at the level required to validate their ability to perform at real world levels, then a recommendation was made to change the evaluation method.

Step 5--Is the Training Timely?

In this final step the study addressed two questions. First the study assessed if the training is conducted at a time in an officer's career that prepares him for his duties. The purpose was to determine if the TDMP training occurs too early or too late, relative to an officer's career, to be useful in the conduct of his duties. The study also determined the length of time that elapses between instruction and application. As noted earlier, it is predictable that the more time that elapses between instruction and application, the greater the probability that proficiency will decline.

This step of the methodology conducted a survey of Aviation officers to determine the timeliness of instruction using a survey administered to the aviation officers attending CGSOC. These data were then compared against the Aviation OES structure to determine if the training is timely, relevant to Aviation officers' careers. Additionally, officers were surveyed to determine the time lapse following instruction they experienced before using the TDMP.

Target Population

The population of concern to this study consists of Aviation Branch officers in the grade of Major. These 881 officers represent 20 percent of the total Aviation commissioned officer population.¹³ Functionally these officers represent the junior field grade staff officers within the Aviation branch. Officers in this grade were selected because they have completed all schooling in the AOES and provide ten to seventeen years of experience.¹⁴ Officers in the grade of LTC and above were excluded to ensure recency of experience as a company grade officer.

Sample Population

The survey instrument was administered to Aviation officers who were CGSOC students in the grade of Captain to Major. Total number of available respondents was ninety-three Aviation officers. This sample population represents 10.6 percent of the target population (881 officers). This sample group was chosen because is assumed representative of the target population. Officers in this course have

completed at least one aviation utilization tour, completed the AOES, and are currently in the grade of Captain to Major.

Distribution Methodology

Questionnaires were distributed individually to CGSOC students. Completed surveys were returned directly to the researcher.

Survey Instrument

The survey instrument for this study was a self-administered questionnaire consisting of 15 multiple choice questions, Appendix A contains a copy of the Questionnaire. Respondents were asked to enter responses to questions on a CGSC Form 96 Answer Sheet. The questionnaire was designed to illicit data in three areas: demographic information, officer experience with the TDMP in relation to schooling and assignment, and the officers' personal assessment of the Aviation Officer Education System in relation to the TDMP instruction.

Demographics

Demographic data derived from the survey provided a means of comparing the sample population to the target population to validate the sample. Demographics data also provided a profile that was useful in determining factors that impact the application of the TDMP. Questions 1 thru 7 of the survey provided the demographic data for the sample population. The following provides a discussion of the relevance of each question:

Question 1. Total Army Experience (Time in Service)

Question 2. Total Aviation Experience (Time in Aviation Branch)

Question 3. Defines how officer accessed into Aviation Branch.

Question 4. Aviation officers are managed by aircraft qualifications. Question determines population breakdown by aircraft type.

Question 5. There are five primary aviation units types; attack, cavalry, assault, general support/utility, and medium lift. Question determines population experience by unit type.

Question 6. Used to determine response rate from the three institutions; OAC, CAS3, CGSOC.

Question 7. Determines what sample population education level is.

Timing

The next element of the survey was designed to determine when the TDMP is taught in the OES in relation to when an officer's duties requires its application. Questions 8 thru 12 provided the data for this determination.

Question 8. Determines if the Officers' first experience with the TDMP was in school, in the unit, or CTC/BCTP.

Question 9. Determines when in the OES, officer first received instruction in the TDMP.

Question 10. Determines time elapsed after instruction and opportunity to apply skill.

Question 11. Used to determine when duties first required application of TDMP.

Question 12. Used to determine what rank and duty position officer held when duties first required TDMP application.

Officer Assessment of OES

The next element of the survey was designed to allow officers to assess instruction received in the Aviation OES. Questions 13 thru 15 provided the respondents an opportunity to evaluate the quality of the education system in teaching the TDMP based on personal experience. Additionally, these questions provided the officer the opportunity to assess the timing relative to his own professional needs. The following provides a discussion of the relevance of each question.

Question 13. Used to determine respondents personal evaluation of the quality of TDMP instruction.

Question 14. Used to determine respondents assessment of time/needs of TDMP instruction.

Question 15. Used to determine what learning environment respondents felt contributed the most to their learning the TDMP.

Response Analysis

Once surveys were returned, responses were quantitatively and statistically analyzed using SPSS Chi Square Omega regression analysis.¹⁵ Although the purpose of the survey was to provide data used to determine the timeliness of instruction, a number of other factors were analyzed to determine if recommendations could be made for further study or other conclusions could be drawn from the data. Appendix B provides an explanation of data analysis and tables.

Conclusion

At this point in the methodology, the study summarized its findings and recommendations. There were four possible outcomes anticipated from analysis:

1. The OES will be validated with a conclusion that the OES successfully prepares Aviation company grade officers to apply the TDMP. The recommendation would then be further study to research non-training related causes for the problem.

2. The OES does not require the TDMP to be taught in the OES and it in fact is not taught. The recommendation would be to implement formal training in the OES.

3. The OES does not require the TDMP to be taught in the OES, but it is taught successfully or unsuccessfully. The recommendation would be to standardize the TDMP as a performance objective in the OES.

4. The OES requires the TDMP to be taught, but one or all of steps four and five will show shortfalls in the system that need to be addressed. The recommendation would be to adjust training as appropriate.

ENDNOTES

¹ U.S. Army, STP 21-II-MOS, Military Qualifications Standards II Manual of Common Tasks For Lieutenants and Captains (Washington D.C.:Department of the Army, January 1991), 1-2 to 1-3.

² Susan B. Mettlen, Ph.D., Memorandum, Subject:"Officer Foundation Standards (OFS) Gross Task List (GTL) Staffing for April Task Selection Conference (TSC)" (Fort Leavenworth, KS: Center for Army Leadership, 7 March 94)

³ U.S. Army, STP 21-II-MOS, A-1.

⁴ Robert F. Mager and Peter Pipe, Analyzing Performance Problems or 'you really oughta wanna' (Belmont, CA: Fearon Publisher, Inc.,1975), 3.

⁵ Leslie J. Briggs, Kent L. Gustafson, and Murray H. Tillman, eds., Instructional Design Principles and Application, 2d ed. (Englewood Cliffs, NJ: Educational Technology Publications, 1991), 77-78.

⁶ Ibid., 79.

⁷ Ibid., 79-80.

⁸ Ibid., 78.

⁹ Ibid., 80.

¹⁰ Robert F. Mager, Preparing Instructional Objectives, 2d ed. (Belmont, CA: Fearon Publishers, Inc., 1975), 23.

¹¹ Briggs, Instructional Design, 174.

¹² Ibid., 96.

¹³ Paradise, CPT, U.S.A., telephone interview by author, 28 March 1995, Leavenworth, Kansas, written notes.

¹⁴ Ibid.

¹⁵ SPSS

CHAPTER 4

ANALYSIS

Introduction

At this point in the research process, the data that have been researched, collected, and assembled are analyzed in detail. Chapter 3, Methodology, provided the framework for analysis in this chapter. All data was analyzed in accordance with the appropriate step in the methodology with the objective being to answer the subordinate questions, and ultimately the primary question of this research project: "Does the Aviation Officer Education System (OES) successfully prepare Aviation company grade officers to apply the Tactical Decision Making Process?"

Methodology and Analysis

The methodology used in this study is a five step process as described in Chapter 3, Methodology. These five steps were designed to analyze the effectiveness of the Aviation OES. Each step consists of answering a subordinate question identified in Chapter 1 of this study. In order to answer these four subordinate questions, at each step there are a number of tertiary questions that must first be answered before proceeding to the next step. These steps are progressive and sequential. The analysis at each step must answer the primary subordinate question before proceeding to the next step. This is

necessary due to the hierarchical relationship within the LDP and OES. For instance, the study first had to determine that the TDMP was a required task in the POI before proceeding to an assessment of the instruction in the next step.

To avoid redundancy in analysis, steps one and two of the methodology are omitted in this chapter. Chapter 2, Literature Review, established the existence of the problem and should be referred to for a full discussion of Step 1--analysis and validation of the problem. At Step 2 the study assumes that the problem is related to a skill deficiency and rather than a non-training related cause. Chapter 3, Methodology, has a complete justification for this assumption and its logical reasoning.

Step 3--Is the TDMP an Identified and Required Performance Objective?

In this step, the study researched the LDP and OES to determine if the education system requires the TDMP to be taught. By researching the requirements dictated by Department of the Army, TRADOC, and the Aviation Branch Proponent the study was able to determine if the TDMP is a required performance objective in the Aviation OES. Additionally, by comparing the requirements at each level, the study was able to determine if any discrepancies exist between the three levels.

Department of the Army/TRADOC

As the Army's training command, TRADOC prescribes requirements for the officer education system. Using the framework of the three progressive and sequential pillars of the LDP, TRADOC defines the tasks required under the institutional, operational, and self-development

pillars. These tasks are outlined in STP 21-II-MQS and provide the base tasks for the LDP. Additionally the OFS standardizes officer common core tasks by developing a gross task list that specifies common military training required for the basic and advanced course curriculum. OFS in essence became TRADOC's mechanism to manage common military training and tasks under the officer education system (OES).¹

OFS Gross Task List (GTL)

A review of the Captains GTL found that there are 83 total tasks. Of the 83 tasks required for OAC common core, only 12 of the tasks can be associated with war-fighting skills. The point relevant to this study is that the TDMP and/or its components are not included in the list of critical tasks. However, it is embedded as part of Task 01-3303.03-0013 July 1990, Prepare Battalion Combat Orders. A review of the Lieutenants GTL resulted in similar findings. As in the OAC GTL, the TDMP is not a primary task, but is embedded as the eight troop leading procedures in task 04-3303.02-0002, July 1990, Prepare Platoon or Company Combat Orders.

The relevance of these findings is that at a minimum Department of the Army and TRADOC do require the TDMP to be taught in the OBC and OAC as an embedded task.

AVOAC and AVOBC Programs of Instruction

The next step in the research was to analyze the Programs of Instruction (POI) for the Officer Basic Course and Officer Advanced Course. The purpose of the analysis was not focused on the methodology or objective of the instruction, but rather validating or invalidating

whether the Troop Leading Procedures and/or the Tactical Decision Making are included in the POIs as mandated by TRADOC. A complete analysis of these POIs can be found in Chapter 2, Literature Review. The important finding to note is that both the AVOBC and the AVOAC include the troop leading procedures/tactical decision-making process.

The initial analysis of these two POIs answered two subordinate questions of this thesis. First it confirmed that the AVOAC and AVOBC are providing instruction in the TLP and TDMP. The second question it answered was that the AVOBC and AVOAC instruction does conform to TRADOC guidance, however this guidance is not definitive. Although TRADOC assigns proponentcy and responsibility for training support packages (TSP) it does not mandate strict adherence to these TSP's and leaves the methodology to the school commandant's discretion. At this point, the research assumed that the methodology is adequate while validating that the tasks are instructed IAW TRADOC guidance. Adequacy of the instruction was assessed during the next step of the study.

Step 4--Is The Instruction "Good"?

In this step the study assessed the training received in the OBC and OAC in relation to the five elements of instruction: real world goals, objectives, content, method, and evaluation. It is important to note that this step actually evaluated the POI, assuming that this document is correct as published and reflects actual instruction in these courses. Using these five elements the study determined if the instruction provided in the OBC and OAC is relevant (performance objective=real world skill), complete (sum of sub-tasks=performance

objective), appropriate (method of instruction teaches expected performance), and finally does it validate the learning process through evaluation.

Real World Goals

Defining the real world goal provided a starting point for this step in the methodology. This real world goal describes the skill(s) the Army expects officers to be capable of performing after completion of instruction in the AVOBC and AVOAC. For this study the Army's expectation is: "Given a tactical scenario in a simulated (FTX, STX, CPX, etc.) or wartime environment an officer can apply the four-step TDMP described in FM 101-5 to prepare, in writing or orally, an OPLAN or OPORD." The remainder of this step determined if the instruction provided in the AVOBC and AVOAC attains this goal.

Instructional /Learning Objective

Using the model for a "useful objective" defined in Chapter 3, Methodology, and shown below the study evaluated the consistency between the learning objective and real world performance. The POIs of the AVOBC and AVOAC were analyzed to determine if the learning objectives, based on the useful objective model, were consistent with the real world performance.

"Useful Objective Model"

1. Task: Prepare an OPLAN or OPORD, in writing or orally
2. Condition: Given a tactical scenario, simulated or wartime, and ST 101-5

3. Standard: Officer applies the four step TDMP IAW ST 101-5

Aviation Officer Basic Course (AVOBC) POI Analysis

A review of the AVOBC POI found that a learning objective that replicates the "useful objective" model does not exist. Four tasks were found in the AVOBC Phase I and II POIs that relate to MQS Task # 04-3303.02-0014, Prepare Platoon or Company Combat Orders. These tasks are listed at Appendix C as extracted from the AVOBC POI. Analysis of these TLOs found that they do not conform to the Task, Condition, Standard format as prescribed by Mager², but instead provide a named block of instruction and a summarized description of that instruction, or "scope." Within the "scope" some general ideas or conclusions can be drawn to ascertain what instruction the student will be subjected to and what the student will be expected to do. In the present form, however, a comparison between the POI and the "useful objective" cannot be completed.

In order to compare the TLOs with the "useful objective" it was first necessary to locate tasks that supported OFS Task # 04-3303.02-0014, Prepare Platoon or Company Combat Orders.³ Analysis of the "scope" of the four TLO's at Appendix C provided a means of deducing a "useful objective." By extracting the key elements of these four TLOs and arranging them in the performance objective model, an objective that replicates the model was extrapolated and formulated:

1. Task: Conduct mission planning at troop/company level, prepare and orally issue a troop/company order
2. Condition: During advanced field training exercise

3. Standard: Utilizing the troop leading procedures

When constructed in this format the AVOBC TLO shows consistency with the "useful objective" model. The key finding at this point was that the AVOBC does contain a TLO, through derivation, that is consistent with the real world performance and the Army's expectation.

Aviation Officer Advanced Course (AVOAC) POI Analysis

A review of the AVOAC POI found thirteen TLOs that directly or indirectly relate to the TDMP and MQS Task # 01-3303.03-0013, Prepare battalion combat orders.⁴ These TLOs were extracted from the POI and are found at Appendix C. As in the AVOBC, these TLOs taken individually do not model the "useful objective". Additionally, the task format provides a description of the block of instruction, but not what the instruction should yield. However, given the limited information provided in the TLO, it is impossible to construct a useful objective from extrapolation and consolidation of the tasks listed in APPENDIX C. The study's finding was that TLOs, as described in the POI, do not model the "useful objective" derived in the previous step.

Content of Instruction

In this sub-step, the research analyzed the content of the POI to determine if the sub-tasks or skills necessary for a student to achieve the stated objectives are included in the POI. As described earlier, the TDMP consists of four intermediate steps: Mission Analysis, COA Development, COA Comparison, and Decision.⁵ These four steps are the skills or tasks necessary to complete the TDMP and will be

used to analyze the POI. For content to be assessed complete, all four tasks had to be included in the AVOBC and AVOAC POIs.

AVOBC Content

As shown in Appendix C, four TLO's in the AVOBC POI are associated with the TDMP. An analysis of the four TLO's revealed only three of the sub-tasks associated with the TDMP are reflected in the POI: mission analysis, IPB, and preparation of an order. COA development and COA analysis and comparison are not included in the POI. Although these tasks may be taught in the AVOBC, the TLOs do not reflect their inclusion in the instruction.

AVOAC Content

Using the same model as above the thirteen AVOAC tasks in Appendix C were analyzed for completeness of instruction in the TDMP. Based on analysis, it was determined that AVOAC POI includes all tasks/subtasks of the TDMP.

Conclusion

From this analysis the study had three findings. First, the AVOBC POI does not reflect instruction in all the tasks or sub-tasks required to perform the TDMP. However, because of the format of the TLO's in the POI this evidence is not conclusive. Since the TLO's are not presented in a standard task, condition, standard format it is possible that the missing sub-tasks are included in the instruction, but not reflected in the POI. Based on available information, the study found the content of the AVOBC incomplete.

Second, all tasks/subtasks required to perform the TDMP are reflected in the TLO's of the AVOAC. Based on an assessment of the POI the research found the AVOAC content was complete.

The last finding is universal for both POIs. As noted in the AVOBC POI assessment, absence of tasks from the POI does not necessarily mean that the instruction does not occur. Likewise, inclusion does not mean instruction does occur. The only manner the study could have conclusively determined content would have been through observation of instruction. The findings of this study are based solely on an analysis of the POI and refrain from drawing conclusions on the actual instruction.

Instruction Methodology

In this element the study determined the method of instruction and its reflection of the expected learning outcome of the instruction. For the purpose of this research, the study analyzed the POIs to determine if students are provided with an opportunity to apply the TDMP.

AVOBC Instruction Methodology

Referring to the TLO's at Appendix C, two tasks were found that described an opportunity for students to apply the eight TLP and/or the TDMP during the course. The Warfighting Seminar and the Advanced Field Training both provide practical exercise in the TDMP at platoon and company level. In both TLOs the students prepare combat orders using the eight troop leading procedures or elements of the TDMP during a tactical scenario. The shortcoming of the TLOs is that they do not

describe what capacity or environment the students perform these tasks. Since this is not addressed, some uncertainty regarding the expectation of the student remains open.

AVOAC Instruction Methodology

A review of the TLOs listed at Appendix C found five TLOs that reflect an opportunity for students to practice the application of the TDMP. These five practical exercises reflect an opportunity to develop, brief, and rehearse an operations order for brigade and battalion level operations. The shortcoming of these tasks is that they do not reflect the condition and standard that students perform these tasks to. What capacity and environment the student performs these tasks is unclear.

Conclusion

Although both POIs contain TLOs that reflect an opportunity to apply the TDMP during practical exercises, neither POI reflects in what condition and capacity the students are expected to perform. As written in the POIs, TLOs do not reflect an opportunity for the students to apply the TDMP in a tactical scenario as a platoon leader, commander, or staff officer.

Evaluation

In this element of the analysis, the study assessed the evaluation process in the AVOBC and AVOAC. The purpose was to determine what means the courses use to evaluate the TDMP instruction and is it appropriate for the level of learning, or cognitive objective level, the student is expected to achieve.

As determined in the previous element, Instructional Methodology, both the AVOBC and AVOAC utilize practical exercises to demonstrate successful achievement of the learning objective. In both courses the stated objective of instruction is the application of the TLP/TDMP. During these practical exercises, students are evaluated by a small group instructor to determine their success at applying the TLP/TDMP in a given scenario.

Using Bloom's six levels of cognitive objectives⁶ as discussed in Chapter 3, it was determined that there is a match between what the real world performance objective (application of the TDMP in a simulated or combat environment) and the level that students are evaluated at (practical exercise requiring the application of the TDMP in a given scenario). The real world objective requires a cognitive level of "application" of the TDMP and the instruction evaluates the students ability to "apply" the TDMP. The finding of the study was that there is consistency between what the officers will be expected to do following instruction and the cognitive level the instruction evaluates.

Step 5--Is the Training Timely?

Using the data derived from survey responses, this step determined if TDMP training is timely. Two elements of instruction "timeliness" are addressed. First the data was analyzed to determine if aviation officers receive instruction in the TDMP before they are required to apply it in the course of duties. Second, the data was analyzed to determine if there is a significant lapse in time between when the instruction is received and when the officer has an opportunity

to apply the TDMP. Frequency response and question cross-tab data is located in Tables 2 thru 8, Appendix B.

Demographics of the Sample Population

The return rate of the survey was 77 percent, with 72 of the 93 officers surveyed completing and returning the survey. All officers who returned the survey are currently attending CGSOC. The majority of officers have between eleven and twenty years of service (95.7 percent) with 92.9 percent indicating that they had greater than ten years in the Aviation branch. Additionally, 94.4 percent of the sample population have completed all or part of their company grade education (OBC and OAC) in the AOES, with the majority (72.9 percent) indicating that they had completed OBC in another branch before transferring to the Aviation branch.

Instruction Versus Duties

The data from a number of the questions the officers were asked to respond to can be used to determine the effectiveness of the AOES ability to match timing of instruction proceeding a duty requirement to apply the TDMP.

Question 9 Versus Question 11

Comparing when an officer first received instruction in the TDMP (Question 9) to when an officer's duties first required the use of the TDMP (Question 11), the study determined the timeliness of the instruction. Table 1 provides the results of this comparison.

Table 1. Cross-tab Data Derived From Comparing Responses for First Introduction Versus First Duty Application of the TDMP

Q9 vs Q11	LT/CPT	LT/CPT	CPT After	MAJ After	NOT REQD
	After OBC	After OAC	CAS3	CAS3	
PRE/OCS/OBC	44.4%	11.1%	11.1%	33.3%	0%
OAC	13.3%	36.7%	43.3%	3.3%	3.3%
CAS3	10.5%	10.5%	52.6%	5.3%	21.1%
CGSOC	0%	11.1%	22.2%	33.3%	33.3%
NO INSTR	0%	0%	100%	0%	0%

Source: Aviation Officer Education System Survey

Responses to these questions indicated that the duties of a majority of the respondents did not require their use of the TDMP until after they had received their first instruction in the TDMP. Only 13.3 percent of the officers who first received TDMP instruction in the OAC said that their duties required it before that time. Additionally, only 21 percent of the officers who indicated CAS3 was their first TDMP instruction said their duties required it before then. As would be predictable, 100 percent of respondents who indicated that the OBC was their first TDMP instruction also indicated that their duties required it after OBC. Only 14.5 percent of the respondents indicated that they had received no instruction, or first received TDMP instruction in CGSOC (with 10 percent of them indicating their duties had required its use).

Using these data, the study found that the training was timely based primarily on the responses of the officers who indicated OAC or CAS3 as their first instruction. Considering that this group (first

TDMP instruction in OAC or CAS) represents 71.5 percent of the respondents, a reasonable conclusion can be drawn that a majority of the respondents indicate that their instruction was timely, that is, instruction was received before their duties required its use.

Question 14

Question 14 asked respondents to assess the timing of the TDMP instruction in the AOES. Respondents were asked to indicate whether they believed TDMP instruction in the AOES was too early, early, about right, late, and too late. The response frequencies are shown below and in Table 2, Appendix B.

Too Early	Early	About Right	Late	Too Late
4.3%	2.9%	40%	24.3%	24.3%

Approximately 4 percent of respondents did not indicate a preference for this question. Of those responding, analysis indicated that 55.8 percent of respondents believe that the TDMP instruction is either late or early, while the majority of these officers, 48.6 percent, believe that the instruction is conducted too late in the AOES. The study's finding, based on analysis, was that a majority of respondents do not believe that TDMP instruction in the AOES is timely.

Instruction Versus Opportunity to Apply

In this element of analysis, the study determined if a significant time lapse exists between when TDMP instruction is received

in the AOES and when the officers have the opportunity to apply it in the performance of their duties. Question 10 asked respondents to indicate how much time had elapsed between when they had first received instruction in the TDMP and the first opportunity to apply it in the performance of duties. Response frequencies are shown below and in Table 2, Appendix B.

1-3 Months	4-6 Months	7-9 Months	10-12 Months	>12 Months
28.6%	14.3%	4.3%	10%	35.7%

Of those responding, only 28.6 percent indicated they used the TDMP within one to three months after receiving instruction. Of the remaining respondents, 45.7 percent indicated that over 10 months had elapsed before they had an opportunity to apply the TDMP following instruction. Based on these data, the finding of the study was that a majority of respondents had experienced a significant amount of time lapse (> three months) between instruction and use of the TDMP. Additionally, the study determined that this time differential may have caused some deterioration of the skill (application of the TDMP).

ENDNOTES

¹ Susan B. Mettlen, Ph.D., Memorandum, SUBJECT: "Officer Foundation Standards (OFS) Gross Task List (GTL) Staffing for April Task Selection Conference (TSC)" (Fort Leavenworth, KS: Center for Army Leadership (CAL), 7 March 94), 4-5.

² Robert F. Mager, Preparing Instructional Objectives, 2d ed. (Belmont, CA: Fearon Publishers, Inc, 1975), 19-23.

³ U.S. Army, STP 21-II-MQS, 3-85.

⁴ Ibid., 4-29.

⁵ U.S. Army, ST 101-5, Command and Staff Decision Processes (Fort Leavenworth, KS: Command and General Staff College, January 1994), I-2-2.

⁶ Leslie J. Briggs, Kent L. Gustafson, and Murray H. Tillman, eds., Instructional Design Principles and Application, 2 ed. (Englewood Cliffs, NJ: Educational Technology Publications, 1991), 95-96.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The thesis of this study was, "Does the Aviation Officer Education System (AOES) successfully prepare Aviation company grade officers to apply the Tactical Decision Making Process?" The purpose of this study was to analyze the Aviation Officer Education System (AOES) to determine if it was adequate to accomplish this goal. The study analyzed the content of the instruction and the timing to arrive at its conclusions.

Questions Answered

Four subordinate research questions were examined to provide the basis of adequacy for the analysis of the AOES instruction. These four questions were:

1. Is the TDMP an identified and required performance objective in the Aviation OES?
2. Does the instruction provided meet the duty requirements of company grade officers in operational assignments?
3. Does the OES verify the officers ability to perform to the required standard?
4. Is the TDMP taught in the OES prior to an officer's duties requiring its application?

A number of tertiary questions relevant to the subordinate questions above were examined as well in order to answer the subordinate questions and in turn answer the thesis of this study.

Methodology

The method of analysis in this study used a model derived from Robert F. Mager and Peter Pipe's book, Analyzing Performance Problems or 'YOU REALLY OUGHTA WANNA'.¹ Using this model, a literature review was conducted to examine the leadership development process and the officer education system. Additionally, a survey was conducted of aviation officers currently attending CGSOC to determine the timeliness of TDMP instruction in the AOES.

Findings

The results of this study's research indicate the Aviation Officer Education System does not successfully prepare Aviation company grade officers to apply the TDMP. Four areas analyzed in this study support this conclusion: problem validation, leadership development process (LDP) assessment, AOES assessment, and AOES survey results.

First, the results of the RAND command and control study, as well as the trends reflected in unit-take home packages (UTHP) suggest that officers have little if any mastery of the TDMP.² In the process of reviewing NTC UTHP, research also found minimal standardization for annotating the assessment of unit performance. Second, analysis of the leadership development process reflects a shortcoming in the TRADOC's system of standardizing the common core training for the OES and enforcing this standard. Third, an analysis and assessment of the AOES

found shortcomings in the AVOBC and AVOAC POIs that indicate that the content of these courses is inadequate and incomplete. Finally, in relation to timing, the study had two findings based on the results of the survey administered. First, the study found that a majority of respondents indicated the timing of the TDMP instruction in AOES aligns itself with the duty requirements of aviation officers. However, the predominant perception of respondents is that the TDMP instruction occurs too late in the AOES. Second, the study found that a majority of the respondents indicated a significant time-gap between when officers receive TDMP instruction and when their first opportunity for application occurs.

Conclusions

As stated previously, the general conclusion of this study is that the company grade officers are not prepared by the AOES to apply the TDMP. Based on the requirements of the leadership development process, the content of the AOES instruction, the perceived "lateness" of instruction in the AOES by aviation officers, and considerable time differential between instruction and opportunity to apply, the AOES falls short of successfully preparing Aviation officers to apply the TDMP.

Conclusions relating to each sub-question of this study follow. The discussion relating to the study's conclusions also serve to answer each of these questions.

Does the OES Provide the Instruction?

Based on the research of the LDP and the AOES, the TDMP is not a required and identified performance objective. As noted earlier, the institutional pillar of the LDP does not specifically identify the TDMP as a critical task. Although the TDMP is an imbedded task in OFS gross task list for both the OBC and the OAC, TRADOC does not specifically mandate that this task to be included in the common core curriculum of either course. Because of this, no standardization is dictated by TRADOC for the instruction of this task although it is included in both the AVOBC and AVOAC.

Is the Instruction Provided Adequate?

As noted, both the AVOBC and AVOAC include either TLP or TDMP instruction as part of their POIs. However, based on a review of the POIs, the content of this instruction falls short of real world expectations. First, TLOs are not clearly written to reflect exactly what instruction is accomplished in either the AVOBC or AVOAC. Neither POIs contain a TLO in the "useful objective" format recommended by Mager, therefore it is difficult to ascertain the expectation of the instruction. Second, based on an analysis of POI content, only the AVOAC includes all sub-tasks of the TDMP in the instruction. The AVOBC does not include COA development and COA analysis and comparison. The third finding is that although the method of instruction in both courses is practical exercise, the conditions and standards prescribed for accomplishment are not indicated in the TLOs.

The shortcomings of the AOES may be attributed to a number of causes. The first reason may be due to TRADOC not identifying the TDMP as a critical task and in turn not providing a training support package (TSP) to standardize formal training. However the primary reason that the study determined that these courses do not provide adequate instruction is based on incomplete TLOs that do not model the "useful objective." This study does not conclude that the instruction is not being provided in the AOES, only that the TLOs, as written in the POIs, do not indicate that the TDMP instruction is adequate either in content or method of instruction.

The last finding is based on results of the AOES survey. Fifty percent of those officers responding indicated that the AOES was not successful in preparing them to apply the TDMP. Although data is insufficient to determine why this perception exists, it should be noted that the officers feel the AOES falls short of their expectations.

Does the Evaluation Method Validate the TLO?

As noted, the evaluation method used in both the AVOBC and the AVOAC is practical exercise. In the practical exercises the students are required to apply the TDMP in a tactical scenario. The study found that this method of evaluation is consistent with the real world expectation that students apply the TDMP in a tactical scenario.

Is the Training Timely?

Based on analysis of the AOES survey responses, respondents indicate that the training in the AOES is not timely. Two elements were

used to arrive at this conclusion: alignment of training with duty requirements and time lapse following instruction before use.

The first element is based on the officers' perception that the TDMP instruction in the AOES is not timely. Responses indicated that 55.8 percent of the officers believe the TDMP instruction in the AOES is either too early or too late, with 48.6 percent of the officers indicating that the instruction is too late. It is important to note that this perception is in contradiction with a majority (71.5 percent) of the respondents that indicated that they received TDMP instruction prior to their duties requiring its use. Based on available data, the study is unable to determine why there is a discrepancy between the two responses.

The second element used to determine the timeliness of instruction examined the time differential between when an officer first received TDMP instruction and when that officer had the opportunity to apply the TDMP. A majority of officers, 71.4 percent, indicated that a time-gap of greater than three months elapsed before they had an opportunity to apply the TDMP following instruction. While it is predictable that the skill may deteriorate after three months, it is significant to note that 45.7 percent of the officers indicated a time-gap of greater than ten months between instruction and requirement to use the skill.

Recommendations

Based on the analysis of this study, the following recommendations are made:

1. TRADOC should include the TDMP as a critical task in the OFS gross task list for both the AVOBC and the AVOAC. Based on the real world expectation that company grade officers be proficient in this task, TRADOC should mandate its inclusion in the common core of OBC and OAC. Additionally, TRADOC should assign proponency for this task to an agency and require a training support package be developed to ensure standardization of instruction in all schools.

2. Aviation branch should review current POIs for the AVOBC and AVOAC. Current POIs for both the basic course and advanced course contain TLOs that do not clearly indicate the expectation of the instruction. TLOs should be constructed that model the performance oriented objective used in current army training doctrine and as suggested by Mager and Pipe. Although TLOs only provide a perception of POI content and may not reflect course instruction, the current perception of these courses is that they do not successfully prepare aviation officers to apply the TDMP. Additionally, Aviation branch should ensure that POIs correctly reflect content of the courses.

3. A standardized format for annotating unit assessments at the CTCs should be implemented. The format should not be in checklist form, but rather a format that allows for consistency in evaluation. Current UTHP do not provide consistent data for analyzing unit performance trends at the training centers. This in turn makes it difficult to reliably ascertain what areas need to be emphasized in training. Additionally, this would improve the current feedback the training centers provide to schools on individual training shortcomings.

By ensuring consistent unit evaluations, the schools could better focus their training efforts.

Recommendations for Further Research

Based on the limited scope of this study, the following recommendations for future research are suggested. These areas may assist in determining the impact of shortcomings in the OES noted in this study on the LDP.

1. A longitudinal study should be conducted Army-wide to determine if the timing of TDMP instruction in the AOES has broader implications. A weakness of this study is its retrospective nature. The officers who responded to the survey indicated that they experienced a significant time-gap following TDMP instruction. However, their experiences may not be indicative of future company grade officer experiences. Additionally, this study focused only on the impact of TDMP instruction relative to Aviation branch officers. Further study may determine that the findings in this study are branch specific. However, the findings of this study may indicate a systemic problem within the company grade officer education system as a whole.

2. The OES of each branch should be researched to determine if similar shortcomings exist as in the Aviation branch. Since this study has already determined a shortcoming in the LDP doctrine and OFS, the research should focus specifically on branch schooling.

3. Research should be conducted in conjunction with the CTCs to validate the current OFS gross task list. These training centers provide the closest replication of combat for Army units in a peacetime

environment. By determining what tasks are critical to battlefield success at the CTCs, an OFS task list could be constructed to ensure that company grade officers are receiving instruction necessary for their success.

4. This study focused on the institutional pillar of the leadership development process and its impact on preparing officers to apply the TDMP. Research should be conducted on the operational pillar and its impact on preparing officers to apply the TDMP. Specifically, the issue of why officers experienced a significant great time lapse between instruction in the institutional pillar and use in the operational pillar should be addressed.

Significance of the Study

The significance of this study is that it identified a probable cause for the problem identified by the CTCs as a "trend": Aviation officers do not successfully apply the TDMP. However, additional research, as indicated above, is needed to determine if other factors have an impact on this trend. Additionally, the study identified shortcomings in the AOES and provided recommendations to the Aviation branch that may help improve the quality of instruction to Aviation company grade officers.

ENDNOTES

¹ Robert F. Mager and Peter Pipe, Analyzing Performance Problems or 'you Really Oughta Wanna' (Belmont, CA: Fearon Publishers Inc., 1975), 3.

² Jon Grossman, Battalion Level Command and Control at the National Training Center (Santa Monica, CA: U.S. Army Arroyo Center, May 1994), i-35, DRR-720-A.

APPENDIX A
SURVEY INSTRUMENT

Aviation Officer Education System Survey

Please fill in your response completely on the mark-sense answer form provided.

1. What is your total number of years of service? (Round up to full years)
A. 1-5 Years B. 6-10 Years C. 11-15 Years D. 16-20 Years E. >20 Years
2. How many years of commissioned service do you have in the Aviation branch?
(Round up to full years and include IERW)
A. 1 Year B. 2 Years C. 3-6 Years D. 7-9 Years E. >10 Years
3. Which of the following tracks best describes your accession into the Aviation branch?
A. Prior Service (EM/WO), OCS, IERW
B. Prior Service (EM/WO), Other Branch, IERW
C. Pre-commissioning (ROTC/Service Academy), AVOBC, IERW
D. Pre-commissioning (ROTC/Service Academy), Other Branch OBC, IERW
E. Pre-commissioning (ROTC/Service Academy), Other Branch OBC/OAC, IERW
4. What aircraft mission type do you have the majority of your experience in?
A. AH B. OH C. UH D. CH E. Fixed-wing
5. What type unit do you have the majority of your experience in?
A. Attack B. Cavalry C. Assault D. GS/Utility E. Medium Lift
6. Which school are you currently attending?
A. OAC B. CAS3 C. CGSOC
7. What is your current highest level of military education completed?
A. OBC B. OAC C. CAS3 D. CGSOC (MEL 4)
8. When were you first introduced to, or required to use the Tactical Decision Making Process (TDMP)?
A. OBC B. OAC C. CAS3 D. Unit E. JRTC, NTC, CMTC, BCTP
9. When did you first receive instruction in the application of the TDMP in the Officer Education System (OES)?
A. Pre-commissioning/OCS/OBC
B. OAC
C. CAS3
D. CGSOC

E. Did not receive TDMP instruction in the Officer Education System (Go to # 11)
10. How much time elapsed between the first TDMP instruction you received in school, and your first opportunity to apply the TDMP in the performance of your duties?

A. 1-3 months B. 4-6 months C. 7-9 months D. 10-12 months E. > 12 months

11. When did your duties first require you to use the TDMP in relation to schooling you had completed ?

OBC-----OAC-----CAS3 -----CGSOC
A. LT/CPT B. LT/CPT C. CPT D. MAJ

E. Duties have not required. (Go to #13)

12. What was your duty position and rank when your duties first required you to use the TDMP?

Platoon Leader-----Commander-----Staff Officer
A. LT B. LT C. CPT D. LT E. CPT

13. In your opinion , did the Aviation officer education system successfully prepare you to apply the TDMP in the performance of your duties?

A. Yes B. No

14. In your opinion, the TDMP is being taught _____ in the Aviation officer education system.

Too Early-----About Right-----Too Late
A. B. C. D. E.

15. What experience have you had in your career that had the greatest impact on your learning to apply the TDMP?

A. School (OBC/OAC/CAS3/CGSOC)
B. CTC (JRTC/NTC/CMTC)
C. BCTP
D. Unit Assignment (OPD/FTX/Duty Position/etc.)
E. Self-development

Please return the completed survey to your instructor. Thank You for taking time to complete this survey. Your responses will be invaluable to my research.

APPENDIX B
RESPONSE FREQUENCY TABLES

TABLE 2
FREQUENCY OF RESPONSE

Question #	A	B	Responses		D	E
			C			
1-TIS	1-5 yrs - 0	6-10 yrs - 2.9%	11-15 yrs - 77.1%		16-20 yrs - 18.6%	>20 yrs - 1.4%
2-TFOS	1 yr - 0	2 yrs - 0	3-6 yrs - 0		7-9 yrs - 7.1%	>10 yrs - 92.9%
3-Assessment	OCS/IERW - 2.9%	OCS/Other Br/IERW - 14.3%	AVOBC/IERW - 4.3%		OBC/IERW - 72.9%	OBC/OAC/IERW - 5.7%
4-A/C Type	AH - 32.9%	OH - 27.1%	UH - 31.4%		CH - 7.1%	FW - 1.4%
5-Mission Type	ATK - 32.9%	CAV - 30%	ASLT - 21.4%		GS/UTIL - 5.7%	MED LIFT - 8.7%
6-Current School	OAC - 0	CAS3 - 0	CGSOC - 100%			
7-MEL	OBC - 0	OAC - 0	CAS3 - 71.4%		CGSOC - 28.6%	
8-1st TDMP Exper	OBC - 8.6%	OAC - 40%	CAS3 - 21.4%		UNIT - 27.1%	CTC/BCTP - 2.9%
9-1st TDMP Inst	PRE/OCS/OBC - 12.9%	OAC - 42.9%	CAS3 - 28.6%		CGSOC - 12.9%	No Instruction - 1.4%
10-Lapse Time	1-3 mos - 28.6%	4-6 mos - 14.3%	7-9 mos - 4.3%		10-12 mos - 10%	>12 mos - 35.7%
11-Duty vs School	LT/CPT OBC - 14.3%	LT/CPT OAC - 21.4%	CPT CAS3 - 38.6%		MAJ CAS3 - 11.4%	Not Req'd - 11.4%
12-Duty vs Rank	LT PLDR - 11.4%	LT Co Cdr - 14.3%	CPT Co Cdr - 25.7%		LT Staff - 5.7%	CPT Staff - 31.4%
13-AOES Good?	Yes - 42.9%	No - 50%				
14-AOES on Time?	Too Early - 4.3%	Early - 2.9%	About Right - 40%		Late - 24.3%	Too Late - 24.3%
15-Greatest Imp	School - 30%	CTC - 17.1%	BCTP - 10%		Unit - 37.1%	Self Dev - 2.9%

Source: Aviation Officer Education System Survey

Response Crosstab Analysis

In the following tables the responses to selected questions are cross-tabbed in order to analyze the impact of a response to one question versus another.

Table 3

Type Aircraft Versus Duty Position and Rank

Q4 vs Q12	LT PLDR	LT CDR	CPT CDR	LT STAFF	CPT STAFF
AH	8.7%	0%	30.4%	4.3%	56.5%
OH	27.8%	22.2%	16.7%	11.1%	22.2%
UH	6.3%	31.3%	37.5%	6.3%	18.8%
CH	0%	20.0%	40.0%	0%	40.0%

Source: AOES Survey.

Responses are analyzed to determine impact of the type of aircraft a respondent flies versus when respondent's duty position and rank when first required to use the TDMP. (Question 4 responses versus Question 12.)

Table 4

Mission Type Versus Duty Position and Rank

Q5 vs Q12	LT PLDR	LT CDR	CPT CDR	LT STAFF	CPT STAFF
ATTACK	13.6%	9.1%	27.3%	13.6%	36.4%
CAVALRY	20.0%	20.0%	25.0%	0%	35.0%
ASSAULT	9.1%	18.2%	27.3%	0%	45.5%
GS/UTILITY	0%	25.0%	50.0%	25.0%	0%
MEDIUM LIFT	0%	20.0%	40.0%	0%	40.0%

Source: AOES Survey.

Responses are analyzed to determine impact of the aircraft mission type a respondent's experience is in versus when respondent's duty position and rank when first required to use the TDMP. (Question 5 responses versus Question 12.)

Table 5

First Introduction Versus First Instruction

Q8 vs Q9	PRE/OCS/OBC	OAC	CAS3	CGSOC	NO INSTR
OBC	83.3%	16.7%	0%	0%	0%
OAC	10.7%	67.9%	21.4%	0%	0%
CAS3	0%	6.7%	73.3%	13.3%	6.7%
UNIT	5.6%	44.4%	16.7%	33.3%	0%
CTC/BCTP	0%	50.0%	0%	50.0%	0%

Source: AOES Survey

Responses are analyzed to determine if there is a correlation between when respondents were first introduced to, or required to use, the TDMP versus when they received their first instruction in the TDMP. (Question 8 responses versus Question 9.)

Table 6

First Instruction Versus First Duty Application

Q9 vs Q11	LT/CPT OBC	LT/CPT OAC	CPT CAS3	MAJ CAS3	NOT REQD
PRE/OCS/OBC	44.4%	11.1%	11.1%	33.3%	0%
OAC	13.3%	36.7%	43.3%	3.3%	3.3%
CAS3	10.5%	10.5%	52.6%	5.3%	21.1%
CGSOC	0%	11.1%	22.2%	33.3%	33.3%
NO INSTR	0%	0%	100%	0%	0%

Source: AOES Survey.

Responses are analyzed to determine if there is a correlation between when respondents first received instruction in the OES and when, in relation to schooling, their duties required them to apply the TDMP. (Crosstab data Question 9 versus Question 11.)

Table 7

First Instruction Versus Duty First Required to Apply

Q9 vs Q12	LT PLDR	LT CDR	CPT CDR	LT STAFF	CPT STAFF
PRE/OCS/OBC	55.6%	0%	11.1%	0%	33.3%
OAC	6.7%	13.3%	40.0%	3.3%	36.7%
CAS3	6.3%	31.3%	18.8%	12.5%	31.3%
CGSOC	0%	16.7%	33.3%	16.7%	33.3%
NO INSTR	0%	0%	0%	0%	100%

Source: AOES Survey.

Responses are analyzed to determine if there is a correlation between when respondents first received instruction in the TDMP and what their duty position and rank were when they were first required to apply the TDMP. (Question 9 responses versus Question 12.)

Table 8

Perception of AOES Success Versus Timeliness

Q13 vs Q14	TOO EARLY	EARLY	RIGHT	LATE	TOO LATE
YES	6.9%	3.4%	55.2%	27.6%	6.9%
NO	0%	2.9%	34.3%	22.9%	40.0%

Source: AOES Survey

Responses are analyzed to determine if there is a correlation between respondents assessment of the success of the AOES in preparing them to apply the TDMP and their assessment of the timeliness of the AOES instruction of the TDMP. (Question 13 responses versus Question 14.)

APPENDIX C

AVOBC AND AVOAC EXTRACTS

AVOBC POI EXTRACT

The following tasks were extracted from the AVOAC POI, dated January 20 1994. Only tasks related to the eight troop leading procedures and the TDMP were included. There are a total of four tasks related to the TLP and TDMP. Tasks are listed in the same sequence they appear in the POI.

Title: Command, Control, and Communications (C3)

PFN Number: 2817

Clearance: Unclassified

TLO: SCOPE: Provides instruction on the command, control, and communications systems in the US Army and how they function at brigade and task force level. Instruction will cover the problem solving and military decision making process, types and characteristics of military orders, and the parts of an operation order

Title: Intelligence Preparation of the Battlefield (IPB)

PFN Number: 2829

Clearance: Unclassified

TLO: SCOPE: Provides instruction on the five functions of the IPB to include Battlefield Evaluation, Weather Analysis, Terrain Analysis, threat evaluation and threat integration. Practical exercise has student using European map to perform each step of the IPB process. Each step of the process leads to final development of the Decision Support Template.

Title: Warfighting Seminar

PFN Number: 3412

Clearance: Unclassified

TLO: SCOPE: To prepare AVOBC lieutenants for aviation company operations (flight missions). Provide mission analysis and planning at platoon and company level (stressing the troop leading procedures) with practical exercise that leads into mission execution on sand tables (conducted by their platoon trainers on the 2nd day). The lieutenants will be broken down into three groups based on their aircraft type: attack, cavalry, and air assault.

Title: Advanced Field Training

PFN Number: 2847

Clearance: Unclassified

TLO: SCOPE: Provide instruction in actual field training at the troop/company level (68-hour FTX) to include (sub-tasks d-jj excluded intentionally):

- a. Prepare and orally issue a troop/company warning order
- b. Utilize the troop leading procedures to conduct mission planning at the troop/company level.
- c. Conduct a troop/company operations order.

AVOAC POI EXTRACT

The following tasks were extracted from the AVOAC POI, dated April 1 1992. Only tasks related to the eight troop leading procedures

and the TDMP were included. There are a total of thirteen tasks related to the TLP and TDMP. Task are listed in the same sequence they appear in the POI.

Title: Command Estimate Introduction

PFN Number: 4G-1174

Clearance: Unclassified

TLO: Provides information on orienting doctrine with an operational maneuver force. Introduces the student to the systematic tactical planning process which incorporates the decision making process around the brigade mission formulating courses of action and operations orders. Introduces operations and the brigade fight.

Title: Mission Analysis (RQT 2)

PFN Number: 4G-1305

Clearance: Unclassified

TLO: Provides the student with the opportunity to identify specific, implied, and essential tasks in the brigade OPLAN. The student issues guidance to a staff, putting the military decision making process in motion.

Title: IPB/Intel Estimate (RQT 1)

PFN Number: 4G-1306

Clearance: Unclassified

TLO: Presents an introduction to the decision making process doctrinally established in the Army to control and coordinate combat

operations. Provides the student with the opportunity to perform terrain analysis and brief results by identifying avenues of approach and depicting threat organizations in particular situations. The student will develop and brief the events template and the decision support overlay. The exercise culminates with a completed intelligence estimate and briefing.

Title: Operations Estimate (RQT 3)

PFN: 4G-1314

Clearance: Unclassified

TLO: The students prepare courses of action for the brigade in the offense and give oral presentations. This exercise highlights how the operations estimate integrates the staff in supporting the courses of action and assists the commander in preparing his/her estimate. The student will also analyze and compare courses of action in the operations estimate, resulting in a decision by the brigade commander. The students analyze and wargame the courses of action, listing advantages and disadvantages, and through the use of an synchronization matrix, makes a recommendation to the brigade commander for approval. The result is the commander's estimate. The students describe the operation of the logistics system which supports Army in the field, emphasizing division level and below. They are also required to explain the concept of support areas and coordination involved. Students perform logistics planning by analyzing courses of action included in the operations estimate with the end result being the logistics portion of the command estimate.

Title: Operations Order (RQT 4)

PFN Number: 4G-1316

Clearance: Unclassified

TLO: The students will prepare an operations order for a brigade, supported by the appropriate overlays. Students will present OPORD in the five paragraph format as a brigade staff to the division commander.

Title: Low Intensity Conflict PE (J)

PFN Number: 4G-3051

Clearance: Unclassified

TLO: Provides a practical exercise adopted from the Joint Readiness Training Command Low-Intensity Conflict scenario based on the fictitious situation on the Island of Cortina. Exercise consists of advanced readings from FM 100-20 to familiarize the students on the LIC Intelligence Preparation of the Battlefield process. Students are divided into three groups: Each group examines the specific situation, completes the IPB process, develops deployment and occupation task lists, and presents briefing for each phase of the exercise.

Title: Decision Making

PFN Number: 4G-3106

Clearance: Unclassified

TLO: Presents an introduction to the decision making process doctrinally established for use in the Army to control and coordinate combat operations. The student learns the commander and staff actions

leading to a decision concerning the best course of action for a given tactical situation.

Title: Intelligence Preparation of the Battlefield (IPB)

PFN Number: 4G-3119

Clearance: Unclassified

TLO: Provides information on the IPB process to include terrain analysis and development of the intelligence estimate. Gives the student a systematic approach to analyze and portray enemy courses of action, capabilities, and vulnerabilities.

Title: Plans, Orders, and Overlay Techniques (J)

PFN Number: 4G-3141

Clearance: Unclassified

TLO: Provides information on the fundamentals of combat plans and orders and the formats and techniques employed in their preparation. The lesson also presents the fundamentals of military symbology and includes overlay techniques for both offensive and defensive situations.

Title: Aviation Brigade PE (J)

PFN Number: 4G-3066

Clearance: Unclassified

TLO: Provides students an opportunity to plan, write, and brief a complete aviation brigade operations order.

Title: Air Cavalry Operations PE

PFN Number: 4G-3208

Clearance: Unclassified

TLO: Provides students the opportunity to develop, brief, and rehearse a cavalry squadron and air cavalry troop OPORD.

Title: Attack Helicopter Operations PE (J)

PFN Number: 4G-3211

Clearance: Unclassified

TLO: Provides students the opportunity to develop, brief, rehearse, and execute an attack helicopter battalion/company OPORD utilizing the USAAVNC AIRNET facility.

Title: Air Assault Operations PE

PFN Number: 4G-3214

Clearance: Unclassified

TLO: Provides students with the opportunity to develop, brief, rehearse, and execute an air assault task force and company/team OPORD utilizing the USAAVNC Airnetworking (AIRNET) facility.

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